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<u>Abstract</u>

An electro-absorption modulator and electro-absorption modulated laser are described that include a semiconductor layer having an electrically controllable absorption. The material composition of the semiconductor layer is chosen so that the semiconductor layer is substantially transparent to light propagating though the semiconductor layer when a substantially zero or a reverse bias voltage is applied across the semiconductor layer at operating temperatures of the electro-absorption modulator that are substantially greater than 25 degrees Celsius.

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